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ABSTRACT

Four papers on biological and medical sciences libraries were presented at the 1986 International Federation of Library Associations (IFLA) conference. "Activities and Services of Medical Libraries in Japan--Past, Present, and Future" (Kazuo Urata and Toshinobu Suga, Japan) discusses the inauguration of the Japan Medical Library Association (JMLA), the present situation of Japanese medical libraries, bibliographic control of medical literature, international cooperation, and future themes. In "The Status and Development of Biomedical Libraries in China," Daxun He of China traces the history of medical libraries in China, presents statistics on the current state of Chinese medical libraries, and discusses the provision of information services. In "Current Developments in Medical Bibliography in Australia," Sandra Henderson of Australia describes major projects of the National Library of Australia and the Australian Department of Health that have increased the scope and availability of bibliographic resources in that country. Finally, "Union Lists of Serials" (Erika Love, United States), a syllabus prepared for an IFLA Section of Biological and Medical Sciences Libraries workshop, describes the purpose, uses, and benefits of union lists of serials, and provides an introduction to the basics of union list planning and project implementation. An appendix includes a glossary of technical terms; a bibliography of articles, guidelines and standards, and related readings; and sample forms. (KM)

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Division: Special Libraries

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Activities and Services of Medical Libraries in Japan: Past, Present, and Future

by

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I. Inauguration of the Japan Medical Library Association[1,2)]

The activities and services of medical libraries in Japan originated with the Library Association of Governmental Medical Colleges which was founded in November 1927 and became the present Japan Medical Library Association, JMLA. This means that no cooperative associations existed among Japanese medical libraries before that time. The Association was established with the mutual approval of the five medical colleges of Chiba, Kanazawa, Nagasaki, Niigata and Okayama, with the purpose of providing interlibrary loan activities among these libraries. At the Association's Fourth Annual Assembly in 1930 when its membership had increased to eight, a resolution was undertaken to compile a union list of periodicals. In the following year, the first edition of Ikadaigaku Kyodo Zasshi Mokuroku (Union List of Periodicals Received by the Member Libraries) was published. The total number of the journal titles covered was 1,519. In this way, the JMLA has operated on the basis of institutional membership for interlibrary activities among its member libraries as a consortium. Before World War II the Association issued three editions of the union list of periodicals, and promoted the services of medical libraries to contribute toward the progress of medical sciences through practical improvements in interlibrary loan activities, exchange of duplicate issues of journals among member libraries, standardization of methods of purchasing foreign medical periodicals and various other efforts

for improvement of library work.

It was extremely unfortunate that precious resources accumulated in the past were lost during to the War. Books and journals held in many medical libraries were destroyed when the buildings were burnt down. Nevertheless, it was not until after the War that Japanese medical library activities were truly developed and modernized. The United States of America generously gave norm support and assistance to the Japanese medical library community. Through the JMLA or directly, many institutions and organizations in the U.S.A. sent back issues of medical periodicals as gifts to many medical libraries in Japan. The Army Medical Library (presently the National Library of Medicine) had continued to provide free copies of literature that were lost or not held in Japan. In 1951, the Rockfeller Foundation established a scholarship system for retraining medical librarians or practicing medical librarianship at the Keio University Library School. Thus, the basis of medical library activities in Japan was established by fulfillment of holdings and improvement of human resources.

In 1954, the JMLA published the first issue of Igaku Toshokan (Medical Libraries) for the purpose of enlightening medical librarians. Study meetings or seminars were frequently held by medical librarians themselves, particularly 12 study meetings on medical library work during the 3 years from 1955 through 1957. The first Training Course for Medical and

Pharmaceutical Librarians to help beginners acquire basic knowledge of medical librarianship was held in August, 1956, and subseuently came to be held annually, being switched to the current JMLA Continuing Education Course. During these years, new medical schools and colleges were founded through the policy of the Japanese government and their libraries joined the JMLA as a result. In the fourth edition of Igaku Zasshi Sogo Mokuroku (Union List of Medical Periodicals, Foreign Language Periodicals) issued in 1961, a total of 2,875 titles from 48 member libraries were covered and in the fifth edition in 1969, 6,651 from 61. In 1964, the union catalog of foreign medical books acquired by member libraries began to be maintained as card files at the Medical Library of Keio University.

The JMLA is composed of 102 member libraries at present. These are libraries of large-sized hospitals, medical institutions and pharmaceutical enterprises as well as those of 89 medical and dental universities/colleges. Its main activities are shown in Table 1. One particularly important event was the hosting by the JMLA of the 5th International Congress on Medical Librarianship (ICML) which was held in Tokyo in 1985. Five hundred eighty-one librarians from 66 countries participated in the Congress and the JMLA was complimented on its success by many participants.

Besides JMLA's official courses, other training and study activities are undertaken very actively by hospital librarians

and a considerable number of meetings are also held with the librarians' spontaneous efforts.

II. The Present Situation of Japanese Medical Libraries

The present situation of medical libraries in Japan can be ascertained by a comparison between the 1975[3] and 1985[4] JMLA Annual Statistics (Table 2).

Budget for the purchase of books and journals: This has experienced a rise of 220.9% during the past ten years. According to the 1985 statistics, there are nine medical libraries belonging to universities/colleges, the budgets of which are estimated to be more than one hundred million yen. Especially, since 1977, the Ministry of Education, Science and Culture has begun to allocate special budgets for some of the existing university libraries designated as Foreign Periodicals Centers for subscriptions to foreign periodicals which, up to that time, had not been received in Japan, for the purpose of improving the National System of Scientific Information Dissemination. Out of the above nine libraries, four belong to national universities, among which the three universities of Osaka, Tohoku and Kyushu are Foreign Periodicals Centers in the field of biomedical sciences. The other five private university libraries are all medical ones belonging to large universities with many schools or faculties.

Number of holdings: This showed an increase of 141.3%

between 1975 and 1985. That this percentage rise is not as high as that in the budget for the purchase of books and journals can be explained by the fact that prices are skyrocketing.

Current periodicals titles: During this ten-year period, the average number of current periodical titles grew from 1,121 to 1,458. The libraries designated as Foreign Periodicals Centers by the Ministry have increased the number of titles held very rapidly (for example, from 1,643 to 6,175 at the Medical Library of Osaka University), while many other libraries have been unable to increase the number of subscription titles and are frequently compelled to cease their subscription.

Interlibrary loans: The number of these requests received is cited as 1,931 in 1975 and 9,158 in 1985. However, as these figures were attributable to changes in the statistical method used, they cannot be effectively compared. As with the situation ten years before, requests tend to be increasingly concentrate on large libraries with many holdings and good services. According to the statistics for 1985, only five libraries supplied 486,762 items, which is 52.7% of the total number of 922,981 requests received by the JMLA member libraries. The fact that the number of total requests is much higher than the total number of loan requests (233,587) shows that JMLA member libraries respond to demands from non-member libraries. Although the average number of loan requests has increased by a proportion of 179.0% for each member library during the last ten years, it is indicative of the

recent activation of literature search services.

Literature search service: No entry for the literature search service is found in the 1975 JMLA Statistics. It was the Medical Library of Keio University that innovated the literature search service in the mid-1950s for the first time in Japan.[5] According to a survey in 1975[6] concerning the literature search service, only 19 among 79 member libraries replied that they operated such a service. However, since the Japan Information Center of Science and Technology (JICST), that is the MEDLARS Center in Japan, started the JOIS service, an on-line information retrieval system, through public telephone lines in 1977, computer terminals have been introduced into medical libraries all over Japan within only few years. They are now utilizing various kinds of domestic and foreign data bases. Meanwhile, JICST is providing on-line services through JOIS which are shown in Table 3. In particular, MEDLINE was searched 269,195 times and the Japanese Medical Literature File (JMED) 122,873 times.[7] The JMLA member libraries provided a total of 49,327 literature searches in 1985 (536 on average).

III. Bibliographic Control of Medical Literature

The numbers of periodicals in the field of medical sciences that are published in Japan are 1,640 in Japanese, 139 in foreign languages and 1,779 totally. The history of bibliographic services for medical literature can be traced back to the first

issue of the Igaku Chuo Zasshi (Japan Medical Abstracts Journal) published in 1903 by a private enterprise, the Japan Medical Abstracts Society (JMAS). Though indexing or abstracting journals in various specialized fields have been published subsequently, the Igaku Chuo Zasshi is the only tool of secondary materials which comprehensively covers Japanese medical and related literature.

As the volume of data in this abstracts journal, which exceeds 150,000 medical articles, had previously been processed entirely manually method, the time-lag from the publication of the journals covered to the time of abstracting, and between the publication of the abstract issue and that of its index issue was rather long. Also, it must be said that the subject index terms were not assigned in accordance with a controlled system. To solve these problems, a study was implemented in April 1983 with the aims of computerizing compilation and improving subject indexing. In April 1984, the JMAS started to publish a monthly abstracts journal by computerized editing. The method of subject indexing is based on the newly-designed Igaku Yogo Thesaurus for Medical and Health-Related Terms.[9)]

In April 1981, JICST prepared the JMED file with the cooperation of JMAS and inaugurated its on-line service through JOIS. JICST lays stress on 950 domestic principal medical periodicals for the JMED, but includes articles in the medical and related fields selected from about 3,500 domestic journals

that are received at JICST. On the other hand, in March 1986, JMAS launched Title-Guide, an on-line service for titles of articles in the area of clinical medicine, so as to supplement the reduction in time-lag resulting from the issue of the abstracts journal.

IV. International Cooperation

Japanese medical librarians have increasingly attended meetings of medical library associations in foreign countries recently. Also, there are a number of books or back-issues of periodicals that Japanese medical libraries have sent as gifts to libraries in the developing countries. However, only the Southeast Asian Medical Information Center (SEAMIC) has been carrying out the international cooperative activities of a host country.

SEAMIC is a project implemented in 1972 by a private foundation, the International Medical Foundation of Japan (IMFJ), the expenses for the activities of which are entirely borne by the Ministry of Foreign Affairs of the Government. The present member countries consist of Brunei, Indonesia, Malaysia, Philippines, Singapore, Thailand and Japan. Brunei joined in 1984. SEAMIC's services are mainly composed of three programs such as data exchange on infectious diseases, compilation of health statistics, and health documentation and publication services.

With regard to health documentation and publication services, as Urata and Iwanami have reported,[10] SEAMIC provides photocopying services for literature that are not held within participating countries, literature search services, gifts of books or current periodicals and library equipment, and publication services. Medical libraries in Japan supply the demand for copying requests received by SEAMIC-Tokyo from each participating country. The total number of requests in 1985 was 11,993 for photocopies and 280 for literature searches made through MEDLINE with the cooperation of the U.S. National Library of Medicine and the JICST.

The purpose of the publication service is to publish proceedings of SEAMIC seminars or workshops, manuals of health care activities, and books written by authors from the participating countries. In addition to these, it compiles medical bibliographies of each country and union lists of periodicals. Both BIBLIOMED-SM of Singapore and Malaysia and the Philippine Index Medicus of the Philippines, covering articles printed up to 1979, have already been issued. Bibliographies of Indonesia and Thailand covering the same period are now being compiled. At present, it is planned to periodically compile the SEAMIC Index Medicus, intended to cover articles published after 1980 in all participating countries. In order to promote this kind of project, cooperation with international organizations, as well as the World Health Organization, is desirable.

V. Future Themes

Overcoming the exclusiveness of the JMLA: The present JMLA prescribes considerablly high requirements for affiliation. Even an associate member in the form of a small-sized library has to meet the same requirements of holding more than 10,000 books, an annual budget of 10 million yen for the purchase of books and journals, subscription to more than 300 current journals, and more than two professional librarians. Owing to such restricted rules, only libraries of big hospitals or large institutes can become full JMLA member besides university/college libraries. As the principal aim of the JMLA was interlibrary cooperation, a consortium is needed among libraries meeting high requirements, in order to maintain a balance of cooperative activities. However, as hospital libraries have pointed out,[11] the JMLA has to recognize that it has not paid much attention to supplying requests for literature from medium- or small-sized hospitals engaged in and responsible for actual medical care in Japan, and also that it has not made efforts to improve the quality of hospital librarians. It is clearly necessary for libraries of any kind and size to library take a stand to support the nation's care from the aspect of information services, and reexamine their own roles in order to reorganize a new network of interlibrary cooperation.

Activation of research and development: The qualifications

of Japanese medical librarians are being improved and they are now interested in various kinds of research and development in the field of medical librarianship. However, most of such research is carried out on the basis of a person's individual efforts or within the auspices of an individual library. It is essential to have a means of encouraging dynamic medical library activities and medical information services in the future in a more systematical way. To solve this issue, as Suga has pointed out,[12] it is important for the JMLA to have much closer cooperative associations with related organizations, both nationally and internationally, and enthusiastically assist of researchers in various fields including library and information sciences.

Necessity for continuing education: The JMLA holds a three-day continuing education course for beginners and a two-day seminar for senior medical librarians during the summer annually, the purpose and future themes of which have been reported by Minato and Yoshimoto.[13]

The present education system for library sciences in Japan ranges from short courses of about two months offering the certification of librarianship to college-level courses of four years, master courses and doctoral courses. None of these, however, include a course for the education of medical librarians. The only exception is two lecture courses on medical literature and medical informatics held throughout the academic

year, that were implemented at Keio University School of Library and Information Sciences in April 1981. However, as these two courses are conducted for 90 minutes once a week, it is rather difficult for medical librarians living far from the Tokyo area to attend them. It will thus be a future theme to give all Japanese medical librarians opportunity of attending continuing education courses easily and frequently.

Coping with multi-media: Japanese medical libraries have provided information services based on published literature for promoting medical research. At no time have the methods of undergraduate education for medical students and the continuing education of physicians been discussed so seriously than at present. Though management of books and periodicals is surely a basic form of library work, it is also necessary to cope with and grasp the use of various educational materials such as audio-visual materials, medical specimens, medical records and new media as they develop. The present authors are of the opinion that medical libraries should be recognized as a pivotal unit of information management in their own medical schools in future, and that new kinds of methods should be expanded and integrated in order to unify the various different systems. For this, we have to understand the basic concept of the Integrated Academic Information Management System[14] that was developed by N.Y. Matheson as the Principal Investigator.

Promotion of international cooperation: The Japanese medical

libraries have come to regard the 5th ICML as the final time in their long history that they relied on developed countries for assistance. Hereafter, it is anticipated that Japanese medical libraries will act to promote international cooperation by serving as bridges between developed and developing countries, particularly those of Asia, since Japan is a member of Asia.

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Table 1: Activities and Services Offered Presently by JMLA

	frequency
Meetings	
General Assembly	annually
Regional meetings (8 regions)	
Training Courses	
Continuing Education Course (for beginners)	three days/annually
Seminar (for seniors)	two days/annually
Exchange Program of Duplicate Issues of Journals	twice a year
Association Journal	
Igaku Toshokan	quarterly
Library Statistics	
JMLA Annual Statistics	annually
Union Catalogs and Lists	
Union List of Medical Periodicals in the Medical Libraries in Japan	for foreign periodicals 6th ed., 1977 7th ed. will be published in 1986, and will include about 18,000 titles.
	for domestic periodicals 6th ed., 1980
List of Current Periodicals Acquired by the Japanese Medical, Dental and Pharmaceutical Libraries	annually
Union Catalog of Foreign Medical Books	quarterly and annual cumulation
Other Publications	
Collected Papers Submitted by the Participants of the Continuing Education Course	annually
Collected Papers Submitted by the Participants of the Seminar	annually
Medical Subject Headings Translated editions	English-Japanese, 1979 Japanese-English, 1980 Category List, 1980
Others	

Table 2: Transition of Medical Libraries in Japan 1975-1985
(JMLA member libraries 79 in 1975, 101 in 1985) (*private universities or colleges)

(a) Budget for Purchase of Books and Journals (in 1,000 Yen)

Year	1975		1985		Increased Rate
Total	2,115,115		6,291,071		
Average	28,202		62,288		220.9%
Top five	Tohoku Univ.	65,975	Osaka Univ.	180,326	
	Tokyo M & D Univ.	48,739	*Fukuoka Univ.	131,933	
	Niigata Univ.	45,434	*Keio Univ.	127,090	
	Osaka Univ.	45,141	Tokyo M & D Univ.	112,675	
	Univ. Tokyo (excluding the medical colleges established newly)	43,697	*Teikyo Univ.	110,104	

(b) Number of Holdings (vols.)

Year	1975		1985		Increased Rate
Total	6,094,855		10,463,710		
Average	77,150		108,997		141.3%
Top five	Tohoku Univ.	206,220	Tohoku Univ.	288,078	
	Kyushu Univ.	203,308	Osaka Univ.	287,421	
	Osaka Univ.	180,501	Kyushu Univ.	246,949	
	Kyoto Pref. Univ.	165,505	Tokyo M & D. Univ.	226,302	
	Univ. Tokyo	158,734	Univ. Tokyo	221,604	

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(c) Number of Current Journal Titles

Year	1975		1985		Increased Rate
Total	88,547		147,242		
Average	1,121		1,458		130.1%
Top five	Univ. Tokyo	3,019	Osaka Univ.	6,175	
	Tohoku Univ.	2,232	Tohoku Univ.	3,422	
	Hiroshima Univ.	2,040	*Keio Univ.	2,774	
	*Keio Univ.	1,924	*Nihon Univ.	2,686	
	Nagasaki Univ.	1,857	Kyushu Univ.	2,617	

(d) Interlibrary Loans

Requests received

Year	1975		1985		Increased Rate
Total	152,508		922,981		
Average	1,931		9,158		not compaeable
Top five	Kyushu Univ.	13,430	Osaka Univ.	217,360	
	*Keio Univ.	11,255	Univ. Tokyo	154,038	
	Osaka Univ.	10,969	*Keio Univ.	59,336	
	Sapporo Med. Coll.	7,060	Sapporo Med. Coll.	30,636	
	*Showa Univ.	6,895	*Jikei Univ.	25,392	

Loan requests

Year	1975	1985	Increased Rate
Total	102,749	233,587	
Average	1,301	2,329	179.0%

Table 3: On-Line Files Provided by JICST

	File name	Period covered	Items covered/year	Subject fields
Domestic files	JICST Scientific and Technological Literature	1975.4-	500,000	Science and technology
	JICST Japanese Medical Literature (JMED)	1981.4-	60,000	Medicine
	JICST On-going Research	1979-	30,000	Science and technology
	JICST Public Research Reports	1983.4-	4,000	Science and technology
	Daily News on Technology and Products	1983.4-	30,000	Science and technology
Foreign files	MEDLINE	1972.1-	250,000	Medicine
	CASEARCH	1977.1-	450,000	Chemistry
	TOXLINE	1977.1-	120,000	Toxicology
	BIOSIS	1979.1-	350,000	Biological sciences
	CAB	1979.1-	150,000	Agriculture
	COAL	1978.7-	10,000	Coal
	CANCERLIT	1963.1-	50,000	Cancer
	FSTA	1981.1-	20,000	Food science
	INSPEC	1981.1-	200,000	Physics and electrics
	NTIS	1981.1-	70,000	Science and technology
	INIS	1976.1-	90,000	Nuclear science
	EMBASE	1980.1-	250,000	Medicine
	IRRD	1981.1-	15,000	Road

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The Status and Development of Biomedical Libraries in China

by

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The Status and Development of Biomedical Libraries in China

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The undertaking of libraries in China has had a history of several thousand years, beginning from Xia Dynasty (2033-1562 B.C.). The collecting of medical books started from Xi Zhou Dynasty (1066-771 B.C.). Emperor Wu of the Han Dynasty (140-86 B.C.) set up building for storing books, with a collection amounted to more than 33,000 volumes, among which books on medicine came up to as many as 868 volumes. During the reign of Emperor Liu Xiang of Xi Han Dynasty in the time between 32 B.C.-25 A.D., the "Seven Outlines" is the earliest classification in China and perhaps in the whole world as well. The period ranging from Sui Tang Dynasties (581-901 A.D.) to two Sung Dynasties (i.e. North and South Sung Dynasties, 960-1279 A.D.) were the highly developed period for the undertaking of Chinese medical books collection, including various types of official, hospital, medical and medicinal schools and private collections. In Nan (South) Sung Dynasty, catalogues of Chinese medical works, the earliest single book ever being known nowadays --- "Catalogue of Medical Classics" and "Outlines of Medicinal Herbs" (Compendium of Materia Medica of Sung Dynasty) in the Sung Dynasty" were compiled and put into print. Since then, the undertaking of medical books collection kept on developing.

After 1840, western medicine transmitted into China, originally by Christian missionaries and afterwards hospitals and medical colleges, based on the major contents of modern medicine, set up by the government, emerged consequently. And the undertaking of medical libraries

with their chief collection of books and serials on modern medicine has, by the way, develop gradually.

Since the founding of New China in 1949, medical library career in China has made leaps and bounds whether in modern medicine or in the field of traditional Chinese medicine.

At present, medical libraries in China can be divided into 4 categories: 1) Libraries of higher or middle medical or medicinal colleges; 2) Those of hospitals or medical research institutes; 3) Those of medical associations; and 4) Those of health administration departments. According to incomplete statistics, there are at least 2,300 medical libraries of different categories in whole China. In regard to quantity, libraries belonging to hospitals and medical research institutes are at the first place (about 56.8%), whereas those of higher medical and medicinal colleges have only 122 (about 5.3%), but they possess abundant collections, extensive range of readers, relatively superior facilities. Thus they make the main constituent core of medical library system. The present state and activities of the libraries of higher medical and medicinal colleges reflect, on the whole, the special features of the medical libraries' career in China.

According to statistics, among 88 libraries of higher medical and medicinal colleges (including 16 colleges of traditional Chinese medicine) the earliest library building was set up in 1909; in the early 40 years of the 20th century, library building increased by slow degrees; and 69% libraries of the above mentioned institutions were built after 1949.

From random sampling statistics, it can seen that from 1977 to 1984: 1) The area of higher medical and medicinal colleges increased 44%. The average area of each among 82 libraries being amounted to 2,811 square meters with 280 reading seats for each i.e. every 11 pri-

mary users having a seat; 2) The funds increased 151%; 3) Total collection increased 19%, the sum totalling 18,500,000 volumes, the highest amounting to more than 560,000 volumes and the most numerous foreign specialty serials subscribed reaching 2,286 titles. The average collection for each library was 222,890 volumes. 4) Staff members increased 57%. There were 2,415 people in 88 libraries among whom 53% are college graduates and within this scope, 30% having studied medicine or pharmacology, thus constituting a higher percentage. In addition, according to the data of directors or deputy directors, 40% of them are of medical or medicinal specialty, this being a distinctive feature of Chinese medical library ranks.

The average opening time of reading rooms of 88 libraries is 62 hours per week while that of lending, 44 hours perweek. The collection circulation rate of 59 libraries came up to 2,979,023 volume times with an average of 50,492 volume times for each. The yearly duplicating service for readers of 53 libraries amounted to 4,057,896 pages with an average of 76,564 pages from each library. Quite a few libraries have been, to varying degrees, open to the public community. Among the readers received in the Library of Chinese Academy of Medical Sciences and Peking Union Medical College in 1985, 36.9% of them were outside readers come from 179 medical or medicinal units of 20 provinces, municipalities or autonomous regions and among nearly 20,000 articles of medical literatures duplicated by the CAMS & PUMC Library, 99% were requested by the aforesaid units at different levels in the whole country.

As there exists a considerable number of medical and medicinal professionals in Chinese medical libraries, it contributes to gradually strengthen and develop information functioning and to offer initiative service. 32 out of 89 libraries of higher medical and medicinal colleges

have set up information departments run mainly by experts, and 23 libraries have made appointments of information staff in other departments, with a staff numbering over 200 people majoring in information service, amounted to 9% of the whole staff. Among these 55 libraries, 35 (64%) libraries have provided special subject service centered on major scientific research topics; 14 libraries have provided SDI service; and 15 libraries through the cooperation between Institute of Medical Information of the Chinese Academy of Medical Sciences and the National Library of Australia have developed off-line retrieval service. The Shanghai Medical University Library by setting up an international retrieval terminal itself has launched SDI service for 396 programmes including programmes on 22 special topics such as interferon, leukemia, lymphoma, nasopharyngeal carcinoma, etc. "Index of Foreign Literature on Science and Technology (Section of Medicine)" has been co-edited by 36 libraries, which is a retrieval periodical to meet the need of Chinese users.

The Library of the Shanghai Branch of the Chinese Medical Association is a peculiarly representative medical library in performing active information service. For many years its reference department has established a network in contact with 1,210 professionals of 250 units of medical care, teaching and scientific research in and out of the city, and has been providing timely and purposeful information obtained according to the key points in the work of the units or individuals concerned. They have also set up microcomputer SDI service for 7 special topics such as stomach cancer, livercancer, lung cancer, angina pectoris, etc. and manual retrieval service for another 7 special topics such as transplantation of heart, hydrocephalus, etc. The fruitful information advisory service achieved by this medical library really reflects the superiority and distinguishing feature of higher

ratio of medical professionals in Chinese medical libraries viewing from an angle.

The educational function of Chinese higher medical and medicinal Universities and colleges has been strengthening: 70 out of 92 libraries have formally developed and conducted courses on "Retrieval and Utilization of Medical Literatures", with 235 specialists taking part in teaching. Since 1978, 23,767 undergraduates, 4,784 medical postgraduates, 7,039 students in various specialities, totalling 11,314 persons have been trained. 11,314 persons have been trained in rotation, including teachers, physicians and research fellows. The full play of educational function has undoubtedly played a positive role in making the best use of resources of medical libraries for medical care, teaching and scientific research programmes.

The libraries of CAMS and PUMC and Beijing Medical University together with the Information Centre of the Academy of Chinese Traditional Medicine of China have also participated in the revision task of "Chinese Classification of Books Section of Medicine and Medicinal Drugs". Since its founding, the CAMS and PUMC Library has used Catalogue of subject headings all along for nearly 70 years. Recently, libraries such as those of Tongji Medical University and Guangzhou Zhongshan Medical University are using MeSH in cataloguing books in China. As a result, more and more users are to be provided with a new way of retrieval.

Based on the original union catalogue, the Library of CAMS and PUMC edited "1979-1982 Union Catalogue of Foreign Biomedical Journals" and before the end of the 1986, "1983-1985 Union Catalogue of Foreign Biomedical Journals". Leading by the Information Centre of the Academy of Chinese Traditional Medicine of China, participated by more than 100 libraries, a "Union Catalogue of Books and Serials on Chinese Tradi-

tional Medicine in Foreign Languages" is now under compilation.

Before long, the Chinese Medical College Library Association has been established. Under the organizing of the Association programmes of continuing education, collection development, application of new technic in libraries, academic activities have been coordinated and promoted. This will not only contribute a great deal to the development of medical college libraries, but also will make a notable impact on the development of medical librarianship as a whole. Thus, to speed up the conversion of the tasks of medical libraries from 'serviceable' to 'academic', from passive service to active, make them go ahead toward the orientation of possessing modernized means of service and that of scientific organization and management.

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Current developments in medical bibliography in Australia

by

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Acting Principal Librarian

Life Sciences Section

National Library of Australia

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Recent developments in medical bibliography in Australia

by

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Large scale medical bibliography in Australia has been relatively neglected until very recently. Since 1979 the National Library of Australia and the Australian Department of Health have each undertaken major projects which have increased both the scope and availability of bibliographic resources in medicine in this country.

The Life Sciences Section of the National Library has been working on an Australasian Medical Index since 1984. Sixty Australian health and medical journals are being indexed regularly for the Index, and additional general input comes from New Zealand. Monographic material, including Australian conference proceedings, are also being indexed.

Thre are over 10,000 citations in this online database, which is run in parallel with the MEDLARS database on the Australian MEDLINE network. Other organisations contributing to the Index include the Australian Institute

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of Aboriginal Studies (items on Aboriginal health), the Alcohol and Drug Foundation, Australia (alcoholism and drug abuse), the National Health and Medical Research Council (its own sessional reports), the Department of Pathology, University of New South Wales (the biology of ageing) and the Health Department of Victoria (health education).

The National Library is also responsible for the development of the Australian Bibliographic Network, a nationwide cataloguing system with a significant union list function. Many major medical libraries contribute records and holdings to this system. There are to date over four million records in ABN.

The Department of Health library has developed the HEMLOC (Health and Medical Libraries Online Catalogue) which covers the holdings of the thirteen major health libraries. This data is to be transferred in the near future to a new library system, and exchange of data between HEMLOC and the Australian Bibliographic Network is envisaged.

The Department of Health and the Royal Australasian College of Physicians are cooperating to produce the Bicentennial Bibliography of Australian Medicine. The data is being added to the HEMLOC database, and is expected to total about 20,000 records to 1950.

Until quite recently, medical bibliography has been one of the more neglected areas of national bibliography in Australia. A number of initiatives by the National Library and the Australian Department of Health over the past 6 years have rapidly changed the situation, so that today medicine is better catered for than any other area of the scientific literature.

There are about 250 medical/biomedical libraries in Australia (1). Many of these are small, sometimes without a professional librarian, and even some large teaching hospital libraries are poorly staffed. Lack of time, resources or expertise to carry out extensive literature searches have been major reasons for pressure for the development of better bibliographic services in medicine in this country.

Quite a number of Australian health professionals have worked or studied overseas, and come back to Australia with high expectations of their own library's staff and resources. Many have found it frustrating that until very recently it was almost impossible, for example, to locate articles on epidemiology of various diseases in Australia unless the article appeared in one of the few Australian journals indexed for MEDLARS. Over the last twenty years the number of high quality Australian health and medical journals has grown significantly, but the bibliographic

coverage essential for their efficient use has lagged behind.

This paper will focus on the work being done at the National Library on the Australasian Medical Index, the Australian Bibliographic Network and the Retrospective National Bibliography, and at the Department of Health on the Bicentennial Bibliography of Australian Medicine and the Department of Health's cataloguing system.

The Australasian Medical Index addresses a segment of national bibliography which in the past has been covered only accidentally by other systems. Journal literature in other subject fields in Australia has been well covered by indexes such as APAIS (Australian Public Affairs Information Service) and the Australian Education Index.

The Australian Science Index (now ceased) covered science and technology but specifically excluded clinical medicine. Indexing of medical journals was limited to selective coverage of some of the major and more general journals in APAIS and the indexing of a few major journals in overseas databases such as MEDLARS and BIOSIS.

The need for an index of Australian medical literature was recognised some years before work was able to commence. The Australian MEDLINE Network's Life Sciences Consultative

Committee, which represents the interests of most of Australia's medical libraries, strongly supported the notion of an Australian index supplementary to MEDLINE. In 1980 a working party of New South Wales medical librarians prepared a list of health and medical material for possible inclusion in such an index (2). This first list considered all types of documentation, including newspapers, theses, conference proceedings, monographs and journals.

In 1983 the Executive Committee of the National Library approved funding for commencement of the Index, and work began on the preliminary stages. A group of medical librarians from Sydney revised the 1980 list, looking specifically at journal literature, which was to be included in the first stage of the project. This was not an easy task - Current Australian Health Serials (3) lists over 700 titles, ranging from major journals to infrequent single page publications. In 1984 they presented the Life Sciences Consultative Committee with a list of 179 serials with indexing priorities assigned (4). This list forms the basis of selection to date, although for various reasons some titles have had to be omitted, and some new titles have been added. MEDLINE journals are excluded from the Index, as we have no wish to duplicate these records, since they are available in the MEDLINE database on the same Network.

The Life Sciences Section of the National Library and the ADP Branch of the Department of Health devoted considerable time to the development of a data-input system for the new data base. The specifications for the data base (5) were drawn up to make the new database as compatible as possible with the MEDLINE file itself. MEDLARS has been run online in Australia since 1976, on the computer at the Australian Department of Health.

The input system is called DIMS (Data Input Management System) and sets up a full screen format that lists all possible data entry fields down the screen. It is a version of the system developed for the Department's own cataloguing system. The only significant alterations made to the MEDLINE format were the inclusion of fields for author address, enrichment terms for the names of Australian states and state capital cities, and notes fields for such information as conference details.

When we approached publishers for permission to include their journals and abstracts in the data base we also asked for a free copy of each issue, to avoid the necessity of removing items from the National Library's legal deposit collections. All publishers approached to date have been very cooperative, and, as agreed with each publisher, issues are discarded after work is completed on the indexing and data entry.

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Indexing began in 1984, using contract indexers who were required to undertake a short training course at the National Library of Australia. For all journals considered top priority by the selection working party the indexing began with 1980 issues, to give some retrospective coverage. We prefer to keep indexing under our direct control, to ensure consistency and quality of output. One member of staff had some MEDLARS indexing experience, and this helped in establishing our indexing policies and training practices. We follow MEDLARS indexing practices as closely as possible. At the present time we still have two of our three original indexers working for us. They work at home, coming in every two weeks to collect new work. Work is written onto indexing sheets, and data entry done at the National Library. Indexers are paid on a piecework basis, and on average index four items per hour.

The data base, the Australian Medical Index, was made available to the Network in January 1985, with just over 2,000 citations in the online file. The name was changed to the Australasian Medical Index in June 1985 when New Zealand began contributing data. Data input is computer validated against a variety of authority files and all Medical Subject Headings are validated against the MeSH file. The online database is updated weekly with all citations which have successfully passed through the

validation stage.

The Index now includes over 10,000 citations, drawn from a variety of sources, and is expected to grow at a rate of about 5,000 items per year. The basic file now covers about sixty journals on a regular basis, others are still to be added. We are also covering a limited number of Australian medical conference proceedings and conference abstracts. This latter class of material is one for which there is considerable demand and one we hope to increase coverage of as resources permit. Virtually all citations have an online abstract, either from the journal itself (with the publisher's permission) or written by our indexers.

The availability of the data base creation mechanism, and the information dissemination potential created by having the data base on the Australian MEDLINE Network, has attracted some outside organisations to contribute data and funds to the Index (6). The National Health and Medical Research Council in Australia has paid for the indexing and data entry of their own session reports. The Australian Institute of Aboriginal Studies has funded the addition of over 1300 items on the topic of Aboriginal health, and the Alcohol and Drug Foundation, Australia, has paid for the entry of a series of items on drug and alcohol abuse in Australia.

A more ambitious segment of the file is that on the biology of ageing. This is being developed in cooperation with a research group at the University of New South Wales, and involves selection, purchase, indexing and data entry of material on the biology of ageing. This material is international in scope, and this segment of the data base is one that could at some later time be offered a a separate file to other data base vendors, since it is a rapidly expanding research area.

The Health Department of Victoria has begun adding information about health education resources and programs to the database. The resources range from booklets to videos and the program records have data on everything from ante-natal classes to alcoholism rehabilitation courses. The record format is not ideally suited to the latter, but information on aspects such as course fees, course design and so on is accommodated in Abstract and General Notes fields.

The availability of such information in an online database has created a great deal of interest in the MEDLINE Network, and other state health departments may follow suit. The resources (films, videos, booklets) produced in Australia for general health promotion or patient education do not usually receive wide distribution or publicity, so

this file is proving very popular among health professionals interested in such materials.

The Australasian Medical Index is available on the Australian MEDLINE Network. The Network operates on a cost recovery basis, although it will be some time before the Australasian Medical Index is self-supporting. The MEDLINE Network has over 300 member organisations in Australia, New Zealand, Singapore, Papua New Guinea, Hong Kong and the Philippines, all of whom have online access to the files available on the Network. Offline searches are also processed for a number of other countries in the Western Pacific Region. The Australasian Medical Index can be searched in parallel with MEDLARS and is frequently searched only as an offline adjunct to a MEDLARS search, using the same search formulation. The data base has been very well received in Australia and New Zealand, and fills a major gap in our medical bibliography.

The coverage of medical monographs in Australian bibliography has not been as neglected as the coverage of journal literature, but the completeness and availability of data about medical monographs has been expanded dramatically.

The Australian National Bibliography lists all works published in Australia, and overseas material by Australian

authors or about Australia. In addition, a union catalogue (NUCOM - National Union Catalogue of Monographs) has been maintained at the National Library and distributed on microfilm. In the recent past the National Library has greatly expanded its national bibliography and union catalogue role with the establishment, in November 1981, of the Australian Bibliographic Network (8).

This network, based on the Western Library Network system, and utilising the National Library's computer, is a national cataloguing system/union list, which currently has 108 full (contributing) members and 340 enquiry-only customers. It operates on a fully cost-recovery basis. Sixteen institutions with significant medical collections contribute cataloguing data and holdings information to ABN, including nearly all medical schools in the country, making it a major source of information on medical library holdings in Australia.

There are now over four million bibliographic records on ABN. Many of the full participants have been through or are undertaking a retrospective conversion of their library catalogues. Serial records are also being added, giving it a major union list function. All major national agency records are addded to ABN, and the CATLINE file has been acquired but not yet mounted.

The Department of Health Library, with responsibility for a number of specialised health and medical collections around Australia, has developed a separate system (8). HEMLOC (Health and Medical Libraries Online Catalogue) contains over 60,000 cataloguing records for materials held in those libraries and some state health department libraries. The holdings statements included in the database make this an important union list for biomedical material. The database was begun in 1979, and data entry uses the DIMS software also used for the Australasian Medical Index. The database itself is CATLINE-compatible and records can be transferred from CATLINE. Medical Subject Headings are used for subject cataloguing, with the addition of a few LCSH headings for which there is no MeSH equivalent.

There are 13 libraries contributing data to HEMLOC, including major research institutes such as the Commonwealth Serum Laboratories and the National Biological Standards Laboratories. Within the next few months HEMLOC will be replaced by a new library system, and all existing data will be transferred to the new system. Selection of that new system is in progress at present, and since one of the specifications is that it be a MARC system, it is hoped that an exchange of data between that new system and ABN will be possible.

Early medical bibliography in Australia is well covered by

Ford's Bibliography of Medicine in Australia 1790-1900 (9), but the period 1900-1935 is very poorly recorded. As an Australian bicentennial project (the bicentennial of Australia's settlement by Europeans falls in 1988), the Department of Health and the Royal Australasian College of Physicians are coordinating the compilation of a Bicentennial Bibliography of Australian Medicine (BIBAM) (10). This project aims to produce a comprehensive bibliography of Australian medicine up to 1950. There are a number of collections of older medical material such as those of the Royal Australasian College of Surgeons and the Royal Australasian College of Physicians (11) which are invaluable for all those in Australia interested in the history of medicine.

So far material in some Sydney collections has been catalogued, and the records added to the HEMLOC file. Over 3,300 items have been identified, and it is estimated that the final size of the BIBAM file will be some 20,000 items.

At the National Library work is proceeding on the Retrospective National Bibliography(RNB), another bicentennial project. This will cover the years 1900-1950 and some cooperation between the BIBAM and RNB teams is underway. So far over 13,000 items, in all subject areas, have been catalogued for RNB, and entered onto the ABN database.

For the medical librarian in Australia, and the non-medical librarian with an occasional need for medically oriented information, the developments described have led to great increases in work efficiency, and as each of these new databases grow, the medical literature in Australia will come under the best bibliographic control we can manage.

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Union Lists of Serials

by

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85

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PREFACE

As the amount of published information grows, librarians around the world are recognizing the increased importance of resource sharing to aid in the flow of information and to overcome or to at least minimize related economic problems. Union lists can serve in both capacities.

This syllabus describes union lists of serials--their purpose, uses and benefits for participating small and medium-sized libraries everywhere. It offers an introduction to the basics of union list planning and project implementation, emphasizing the importance of standards, bibliographic quality control, followup and maintenance activities. A glossary of technical terms and abbreviations, a bibliography, and sample forms and documents constitute the appendix.

The document does not address the complexities of large-scale union lists of serials in machine-readable form, where the need for international technical standards and exchange formats, i.e., UNIMARC, play a key role. For a comprehensive guide of this sort, the reader is referred to Union Catalogues of Serials. Guidelines for Creation and Maintenance, with Recommended Standards for Bibliographic and Holdings Control, by Jean Whiffin (New York: Haworth Press, 1983).

This syllabus was prepared for a mini-workshop sponsored by the Section of Biological and Medical Sciences Libraries at the 52nd General Conference of IFLA, Tokyo, Japan, 1986.

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August 1986

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UNION LISTS OF SERIALS

Definition

A Union List or Union Catalog of Serials is a single listing of the combined serial holdings or two or more collections, either in different institutions or in different libraries in the same institution provided through the medium of print, microform or a computerized database. For each discrete serial, the Union List gives the bibliographic record and location along with summarized holdings data of each participating institution. In accordance with agreed policy, each participant may report the entire records of its collection or may select records by subject or format.

A SERIAL is defined in ISO 3297-1975, International Standard Serial Numbering (ISSN) as:

> "a publication in printed form or not issued in successive parts usually having numerical or chronological designations and intended to be continued indefinitely. Serials include periodicals, newspapers, annuals (reports, yearbooks, directories, etc.), journals, memoirs, proceedings, transactions, etc., of societies and monographic series.
>
> Note: This definition does not include works produced in parts for a period predetermined as finite."

Purpose

A Union List of Serials may be used:

- To promote resource sharing of library materials within a specific geographic area, local, regional, national or international.
- To develop subject lists in specific disciplines, i.e., the medical or health sciences, law, etc.
- By physical format, such as union lists of microforms, non-print materials such as films, videotapes, etc.

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- A union list of all the participating libraries' holdings regardless of categories.

Benefits

A Union List provides the basis for interlibrary cooperation and facilitates access to serials collections, thereby making the maximum use of resources. Union lists provide for better access to information and library materials and, by virtue of adherence to pre-determined standards, will provide for higher quality bibliographic records.

Uses

Uses for a Union List of Serials are wide and varied. The primary purpose of a Union List is to show which library owns what serial titles or parts thereof. It also serves for interlibrary loan cooperation, for collection development and cooperative acquisitions projects, to exchange material for cooperative storage of serials and for a source of bibliographic authority for serials cataloging and title verification. Finally, a Union List of Serials can also aid in conservation. Taken together, holdings statements of the participants assist in determining what constitutes a complete file of a given title and in assessing the rarity or ready availability of a serial. Projects may then be initiated to fill gaps in collections through microfilming, photocopying, purchase or exchange.

Planning

The decision to establish a Union List of Serials must be preceded by a series of other considerations. For example, facilities and resources may

already exist within the country, region, or among the group of libraries that may serve the objective of the Union List better by other means. Second, facilities which may exist within the country, region, or among the group of libraries could be used to enhance a Union List of Serials project, i.e., computer resources, union list expertise among colleagues among other subject specialties, existing agreements for interlibrary loan cooperation, the concentration of core collections in certain libraries which could make a substantial contribution to a union list project.

In addition to assessing the circumstances and existing conditions, goals and objectives that underlie a proposed Union List of Serials project must be developed.

Legal Considerations

The development of institutional support, funding or cooperative reciprocal agreements must be based on careful consideration of a number of questions:

- Why is the Union List of Serials project being proposed?
- Are the participating libraries or institutions and their users clearly defined?
- How will the existence of a Union List of Serials contribute to greater efficiency of access to serials holdings or assure increased economic use of library resources?
- Are the already existing or proposed resources adequate to compile and maintain the Union List of Serials on a continuing basis?

- Are the participating institutions or libraries financially and technically committed and able to create and maintain the union list?

Technical Requirements

A project can only succeed if accepted standards and formats, maintenance and update protocols and procedures are agreed upon before the project is begun, used consistently throughout the project, and for followup activities to maintain the Union List of Serials. The compiling of a union list is a demanding and exacting activity. To succeed, it requires the commitment of all participating institutions.

IMPLEMENTING A UNION LIST PROJECT

Phase I - Exploratory

Major Steps

- Identify potential participating institutions.
- Generate interest among them.
- Discuss need for Union List and potential uses.
- Gain commitment to the project.

A librarian or administrator interested in a cooperative Union List of Serials project should scan the horizons to determine whether such a project already exists that she/he may join. If a new union list project is thought to be of benefit in a particular area or region, a first step is to identify libraries within a given area which might share the planner's interest in a union list project. Geographical distribution of libraries determines the size of a union list project. For example, libraries scattered over a large geographic area will present a different set of challenges than those in a large metropolitan area where a Union List of Serials project may well be conducted within the city limits.

Once potential participants have been identified, representatives from all institutions involved should be called together for the purpose of planning the union list. At this early stage it is important to determine the scope of collections held by each of them, the availability of machine-readable bibliographic data which would eliminate a large portion of the manual or more labor intensive aspects of union list development, and the degree of commitment each institution brings to the project. (See Appendix A-1 for sample survey questionnaire, p. 16-17.)

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Phase II - Planning

Major Steps

- Define scope of project, i.e., geographic area, types of material to be included, potential uses of union list, potential resource sharing agreements, etc.
- Analyze current serials environment and available resources or partipating institutions to support the project, i.e., computers, software, hardware, or existing machine-readable data.
- Define policy concerning data elements and standards to be applied to the project.
- Determine management structure and central location for the project.
- Determine project perspective: validate understanding of participating institutions on major decision points.
- Devise a plan for funding and other support.
- Make any legal agreements or other arrangements necessary for all participant institutions.(See Appendix A-2 for sample agreement, p. 18-19.)

The planning phase is critical because it defines the project which, in turn, allows participants to identify the extent and nature of resources and work involved to successfully implement the project. A careful survey of existing resources may be necessary to determine the optimum scale of operation before a final proposal is prepared. The extent of comprehensiveness also must be determined at this point. For example, complete coverage of all serial holdings of all participating libraries may strain resources and not add materially to the overall objectives of the union list project. The choice of titles and type of material to be incorporated must be justified as an efficient and cost-effective method of getting those serials in most demand to the user. For example, it may not be necessary to include such items as local bulletins and catalogues, institutional reports, house organs, newsletters, newspapers or certain

other publications that may not be listed in major indexes and hence be of low use for interlibrary loan and other resource sharing purposes.

In addition to such policy decisions, other aspects of content also need to be determined. For example, serials in formats other than print include audio-tapes, those issued in micro- and machine-readable form, i.e., computer based. Should there be current and/or retrospective coverage? Should there be quality judgments made about serials to be included? Should there be restraints on the quantity of records input to the Union List of Serials when resources are limited? Which types of listings should have priority?

Bibliographic standardization is of the utmost importance and has many advantages. The immediate advantage is that such standards are generally available in published form and can be applied and interpreted by both the participating libraries and, eventually, the union list user in a predictable manner. This adherence to a common standard is especially important when the union list project is computer based. Because of personnel constraints, manual lists cannot and usually need not be as comprehensive as long as a single source for bibliographic information is used by all participants to ensure uniformity. The amount of bibliographic data to be included can be determined in advance by participants.

Whatever format is selected for a union list, each bibliographic statement should include the following elements:

Title
Place of Publication
Volume Numbers and Dates of First/Last Issue
Notes to Clarify Title History
ISSN
Control Number (i.e. NLM, OCLC, or other designation chosen by the project to assign to its own titles)

Remember, also, that cross references normally supplied in a major database must be added to a manually produced union list.

Every union list project needs a central location where 1) the editorial work is done, 2) the project director reports or is located, 3) financial accountability is documented, and 4) the activities of the steering or advisory body are coordinated.

Finally, the resources and administrative structure required for implementing a union list will need an agreement among participants which may take the form of an informal understanding, a formal written document or a constitution or articles of incorporation. Generally, an informal agreement depends on the memories of participants and their interpretation of these recollections. It is more desirable, therefore, to prepare a written agreement listing those cooperative activities which project participants have agreed to undertake. (See Appendix A-2 for sample agreement, p. 18-19.)

Phase III - Development

Major Steps

- Develop action plan.
- Develop implementation schedule and timetable.
- Assign tasks.
- Develop monitoring procedures.
- Review and modify plan based on work accomplished thus far.

The development phase is the period during which participants prepare a methodology for designing activities decided upon in the course of the planning phase. Once a detailed design of each activity has been completed, the objectives have been determined, and the various methods of accomplishing these goals have been described, it will be necessary to identify resources required to proceed. The availability or lack of certain resources (i.e., computer support, input terminals, etc.) may greatly affect the decision of which method will be used to accomplish each objective. Possible constraints to be considered are money, people and technology. A time schedule and deadlines allow participants to monitor progress and to assist in timely completion of the work. Furthermore, a time schedule can provide funders with data about when the task is expected to be completed.

This phase also is appropriate for developing a procedure manual which should record the policies of the union list project participants and the procedures to carry out these policies. In particular, the procedure section of the manual should describe those steps required to accomplish a specific activity in enough detail so that participants' staff members can perform these functions.

Phase IV - Implementation

Major Steps

- Initiate plan.
- Monitor timetable.
- Evaluate activities and progress.
- Establish followup and maintenance activities.

A Union List of Serials best serves its purpose as a location tool when it is kept up to date with special attention paid to the inclusion of new titles. Participant institutions and the project center should commit themselves to providing complete and accurate updates reflecting new, changed and deleted records. Method and frequency of maintaining a union list vary with resources available to participants and with methods used to produce the initial list. If the union list is prepared by using an existing bibliographic database, effort spent by individual libraries in maintaining and updating bibliographic data is minimal. If a local or manual file is used to prepare a union list, participant institutions must maintain bibliographic data for new and changed titles. This can be time-consuming. If online terminals are available, each participant can input corrections and changes regularly for maximum currency. Union lists prepared in this way can usually be updated annually. When manual methods are used, techniques which add to the difficulty of updating should be avoided, i.e., numbering entries or using numbers within entries and indexes which must be re-sequenced in the next edition.

For sample bibliographic formats see Appendix A-3, p. 20 and A-4, p. 21.
For sample data collection form see Appendix A-5, p.22.
For sample update forms see Appendix A-6, p. 23 and A-7, p. 24.

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Phase V - Production and Publication

As with earlier planning efforts described in the union list project, available funds will determine how production can be accomplished. The ultimate form of publication, of course, had to be decided early in the planning process and the various ways in which union list information can be produced are listed here:

- Manual file or card catalogue. While it can be kept current by interfiling new information and materials needed for its creation are inexpensive, access to such a file is limited to those on site; information cannot be easily transferred; and duplicate copies of the catalog to protect the information from loss or destruction do not exist. A printed catalog can be produced from a card catalog, although this is a labor-intensive and expensive process. Hence, manual files or card catalogues for union lists are a less desirable option in view of those supported by automation.

- Printed catalogue. Advantages here are: 1) it is portable, 2) multiple copies can be produced and distributed to all participants. On the other hand, a printed catalogue cannot be kept up to date unless copy is derived from machine-readable data. Supplements are possible but the user must engage in multiple searches to gain current information.

- Machine readable database. Union list data that is entered and stored in a computer offers participants a number of options. Computer tapes can be used to generate a paper copy of the list. They can also be used to produce a COM (either in microfilm or microfiche). The machine readable Union List of Serials provides a number of by-products and the creation of sub-files produced by searching the database by one or a combination of fields. For example:

  -- list of titles held by all participant institutions
  -- list of items only held by only one or two institions (scarce items)
  -- listing by broad subject categories
  -- listing of all titles held by a given participating institution, thereby creating an individual listing for that participant
  -- indexes by various key words and other tags in each bibliographic record, i.e., ISSN or some key word.

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- Microfiche. Microfiche can be produced either from a machine readable database, i.e., COM or by filming a card or printed catalogue. Microfiche is lightweight, inexpensive to produce and duplicate, can be updated frequently when derived from a machine readable database, and can be distributed at low cost through mailing copies to participating institutions and other interested parties. It requires a microfiche reader and/or printer, but it is by far the most desirable alternative to an online database of the union list.

No matter what physical form it may take, the finished union list should contain introductory material to explain the purpose and manner in which the union list should be used. It should also outline an editorial policy explaining objectives, intended audience and purposes of the union list. It should describe its scope, what is included/excluded, arrangement, and whether special terminology/abbreviations are used. The holdings statement should be explained and the list of symbols of participating institutions with their full names, addresses and telephone numbers should be given, accompanied by an alphabetical listing of participating institutions with symbols attached.

If the participating institutions have interlibrary loan agreements and photocopying policies, such information might be included. However, once that information appears in the union list, care must be taken that this information also receives periodic review similar to that of the union list itself. Most union lists show one or two sample entries with each element in the entry explained.

Finally the title page should be carefully designed to display: 1) union list title, 2) edition designation, 3) place of publication, 4) name of publisher, 5) date of publication, 6) ISSN. Its verso should show: 1) copyright information if the publication is copyrighted, 2) details of availability and price, 3) where it was printed, and 4) cataloguing and

publication entry. The same holds true if a microform edition of the union list is being planned. The fiche edition should also be given adequate bibliographic identification on a separate title frame. Each microfiche must receive an eye readable header which should include: 1) title of union list, 2) edition statement and date, and 3) number of each fiche and the span covered for each fiche in the set. The introduction should be on a separate fiche and, if possible, should include all material that would appear in a printed edition.

Preparation of a separate printed user's guide to the microfiche edition of a union list also is desirable, for the user may have difficulty in referring to an explanatory fiche while viewing another in the microfiche reader. Finally the microfiche should state the reduction ratio (1 to 48 is a widely used standard; 1 to 42 is the second most common used).

Attention should be paid to those features which contribute to ease of use. For example, in the layout, splitting of records over columns or fiche pages should be avoided. Labeling should be legible and print quality should allow for good readibility under magnification.

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Phase VI - Ongoing Maintenance and Evaluation

Major Steps

- Establish reporting mechanism
- Identify institutional contacts
- Assure continued education
- Evaluate the project.

From the very beginning of union list planning the continuing maintenance of the project requires consideration. Serials change--they split, merge, change titles, or cease publication. Libraries add and drop subscriptions, revise their holdings, or experience other changes within their serials collection. Even an online serials union list will never be completely current. It is important, therefore, to provide for updating the list on a regular basis.

Union list participants should determine who is responsible for reporting changes and updates and how they will be handled. Forms must be devised to indicate how changes and new titles will be reported. (See Appendix A-6 and A-7 for sample forms, p. 23-24.) If a union list is maintained online, input screens will take the place of reporting forms. The frequency of updates and what will be included should be determined. Ideally, updates should come from participants when title changes or other modifications need to be reported. Consideration also should be given to how such information can be shared with the other participants until a new edition of the list appears.

To assure ongoing maintenance, each participating institution should, whenever possible, assign an individual experienced in serials work to take on the responsibility for gathering data and submitting it to the union list project office. This individual should be responsible for

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seeing that instructions from the central project office are followed, that a high level of quality is maintained for the individual institution's serial record, and that accurate contributions in terms of new, changed or deleted records are sent regularly and on a continuing basis to the union list project central office.

It is important that all participating institutions communicate regularly concerning the project, that the contributing or participating institutions ensure that adequate resources are made available to maintain the union list project, that revised holdings statements are submitted to the central office on a regular basis, and that any changes in personnel will not take place until proper replacements are trained to assume the responsibility for the institutional contact to the Union List of Serials project.

A new union list project needs considerably more attention, financial support and central coordination than one which has reached the stage of progressive maintenance. As an ongoing project, the central project office must assess the need for change, for consolidation or expansion of procedures continually. It is important to periodically re-examine the union list project on all levels, looking at financial aspects, staffing, scope, participants as well as methods of producing the union list. It also is necessary to look at the service programs initiated among the participating institutions that are based on the union lists' continued existence, i.e., interlibrary loan, collection development and resource sharing to assess the continued economic and political viability of the cooperative arrangements based on the union list itself.

APPENDIX A

1. Sample Survey Questionnaire
2. Sample Agreement
3. Sample Bibliographic Format # 1
4. Sample Bibliographic Format # 2
5. Sample Data Collection Form
6. Sample Form for Reporting New Title to Central Office
7. Sample Form for Reporting Changes in Holdings to Central Office
8. Sample Detailed Unit Record
9. Serline Unit Record

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UNION LISTS OF SERIALS

Preliminary Participants Survey

Chief Librarian_____

Institution_____

Address _____

Telephone/Telex_____

1. Describe your library's user clientele:

   Administrators_____ Researchers_____

   Teaching Faculty_____ Students_____

   Physicians_____ Others_____

   Nurses_____ Others_____

2. Hours and days the library is open

   _____

3. Hours and days the library is staffed by professional librarians:

   _____

4. Size of the library collection:

   Books _____ Journals _____ Media _____

5. Is the collection catalogued? Yes____ No____
   Do you have a card catalogue? Yes____ No____
   Do you have a computerized catalog? Yes____ No____

6. Are microfilm or microfiche used? Yes____ No____

7. Number of current subscriptions_____

8. Do you have a list of journal holdings? Yes____ No____
   Is is prepared manually? Yes____ No____
   Is it prepared by computer? Yes____ No____

9. Do you bind your journals? Yes____ No____

10. Do you currently borrow through Interlibrary Loan? Yes____ No____

    What are your sources?_____

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11. Do you lend through Interlibrary Loan? Yes____ No____

To whom do you lend?_____

12. Do you own a copy machine or have access to one?

_____

13. Do you have a budget? Yes____ No____

Does your budget support (please check):

books and journals	____	salaries	____
binding	____	travel	____
supplies	____	equipment	____

14. Would your institution endorse and support your library's participation in a Union Serials List project?

_____

_____

15. What benefits do you expect from participating in this project?

_____

_____

16. Is your administration aware that support for a union list project must be ongoing in terms of funds and staffing?

_____

Date _____

Signature_____

Title _____

XYZ UNION LIST OF SERIALS PROJECT

Cooperative Agreement

I. Purpose

This agreement establishes a formal liaison between the undersigned institutions and the XYZ Union List of Serials project, for the following purpose:

1. To designate a project director and to maintian a central project office for the XYZ Union List of Serials project at:

_____
(state name, location and address of central office)

2. To develop a union list of serials showing complete bibliographic records and holdings statements of all participating institutions.

3. To support ongoing maintenance and publication of the XYZ Union List.

4. To develop resource sharing mechanisms among the participating institutions, including but not limited to, interlibrary loan and collection development.

II. General Provisions

A. The central project office and the project director agree to:

1. provide the expertise, training and experience necessary to edit both bibliographic and holdings data

2. assume responsibility for adherence to agreed-upon standards

3. exercise quality control of all records on a continuing basis

4. create, manage and maintain the complete database for the XYZ Union List

5. prepare, distribute and maintain all necessary documentation for the participating institutions, including reporting instructions, definitions, standards to be followed, worksheets and examples.

6. produce the XYZ Union List in _____(state here the agreed-upon media format), accompanied by appropriate introductory and explanatory guides

B. The participating institutions agree to:

1. identify and assign an individual experienced in serials work as project liaison

2. ensure that instructions of the central project office are carried out

3. submit accurate data of new, changed and deleted holdings on a regular and continuing basis

4. provide cataloging copy if necessary

5. support the central office by (state agreed upon financial contribution, if any, or other support)

C. Advisory Committee:

1. There shall be an Advisory Committee composed of one representative from each participant institution. Staff of the central project office shall be ex officio with (or without) voting privileges.

2. The Advisory Committee shall approve all policies governing the XYZ Unon List project.

3. The Advisory Committee shall, on a regular basis, review project activities in general and those of the central project office in particular.

This instrument contains the entire agreement of the parties. It may be changed only by written agreement, signed by all parties.

1. Name of Institution_____

_____ _____
(signature and title of undersigned) (date)

2. Name of Institution_____

_____ _____
(signature and title of undersigned) (date)

3. Name of Institution_____

_____ _____
(signature and title of undersigned) (date)

4. Name of Institution_____

_____ _____
(signature and title of undersigned) (date)

5. Name of Institution_____

_____ _____
(signature and title of undersigned) (date)

UNION LISTS OF SERIALS

SAMPLE BIBLIOGRAPHIC FORMAT #1

(1)—591934000

(2)—A O R N Journal

(4)—new york ISSN: 0001-2092—(7)

(3)—1, 1963-- bm—(5)

(6)—also as association of operating room nurses journal supersedes O.R. nursing

1. Locator or title identifier number: Central office assigns an alphabetic location number to each title. This number is not compatible with other systems and does not appear in the printed list.

2. Title: The distinct journal title as found on the masthead is used, including acronyms if applicable. Each time a journal changes title a new entry is made with cross references.

3. First/last issue: This includes volume and year of the first issue, and volume and year of the last issue for serials which have ceased publication or changed title.

4. Place of publication: List city only except for clarification if city is not unique. If city is not unique or readily identifiable, name of country (or state if in U.S.) should be added. List all locations if there are two or more places of publication.

5. Frequency of publication:

a	- annual	bw	- bi-weekly
sa	- semiannual	q	- quarterly
m	- monthly	i	- irregular
bm	- bi-monthly	bien	- biennial,
w	- weekly	trien	- triennial, etc.
		2, 3, 4	- published once every __ years

6. Notes: Give titles of previous and succeeding journals and the nature of that relationship. These notes also relate the sponsoring bodies, explain acronyms, amplify information given, and clarify ambiguity.

7. ISSN: International Standard Serial Number

UNION LISTS OF SERIALS

SAMPLE BIBLIOGRAPHIC FORMAT #2

(2)—A O R N Journal New York —(3) 0001873 —(1)

(4)—ISSN:0001-2092 Beginning Date: 1, 1963 —(5)

(6)—Supersedes O R Nursing

(7)—Official journal of the Association of Operating Room Nurses

1. Locator or title identifier number: Central office assigns an alphabetic location number to each title. This number is not compatible with other systems.

2. Title: The distinct journal title as found on the masthead is used, including acronyms if applicable.

3. Place of publication: List city only except for clarification if city is not unique. If city is not unique or readily identifiable, name of country (or state if in U.S.) should be added. List all locations if there are two or more places of publication.

4. ISSN: International Standard Serial Number

5. First/last issue: This includes volume and year of the first issue, and volume and year of the last issue for serials which have ceased publication or changed title.

6. Notes: Give titles of previous and succeeding journals and the nature of that relationship. These notes also relate the sponsoring bodies, explain acronyms, amplify information given, and clarify ambiguity.

7. Name of publisher or sponsoring agency: If needed for clarification, name of publisher follows place of publication.

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UNION LISTS OF SERIALS

SAMPLE DATA COLLECTION FORM

The model form below can be used by participants in a union list for reporting their holdings to the central office for manual processing. Sufficient information is included for future conversion to an automated system.

Title_____

(Check one) New Title____ Change Holdings____ Delete____

NLM or Other Control Number (if an existing database is used for bibliographic records_____

_____ _____
1st vol/issue/year of publication Ceased publication with vol/issue/year

Place of Publication_____

Publisher & Address _____

ISSN _____Frequency_____

(Check if applicable) Continuation of____ Continued as ____
Supersedes ____ Superseded by____
Other (specify)_____

Holdings_____

_____

(Check if applicable)
Complete backrun___ Incomplete backrun___ Sparse backrun___

(Check one) Acquiring Current Issues ____ No longer Acquiring Issues ____

Non-Retention Code* _____

Level of Reporting**_____

Holding Library _____

Date of Entry _____

* indicates that library retains for a period of time and then discards
** specific or non-specific

UNION LISTS OF SERIALS

UPDATE FORM A

(Sample Form for Reporting New Title to Central Office)

Reporting Library _____

1. Title _____

_____

2. Place of Publication _____ ISSN _____

3. _____ _____
(First vol/issue/yr of publication) (Final vol/issue/yr of publication)

4. Miscellaneous notes _____

_____

_____

5. Title history (check whether title is:
continuation of___ continued as ___
supersedes ___ superseded by___
other (specify)_____

6. Holdings _____

_____

_____

INSTRUCTIONS:

- Fill in applicable items
- Attach appropriate documentation to prove what you are reporting. For example, for new titles include photocopy of title page(s), cover and masthead. For title changes include documentation for last issue of old title and first issue of new title.
- To report only holdings of titles already established in the XYZ Union List, use Update Form B.
- Consult coding manual for detailed instructions.

UNION LISTS OF SERIALS

UPDATE FORM B

(Sample Form for Reporting Changes in Holdings to Central Office)

Reporting Library _____

Title _____

_____

___We are reporting holdings for this title for the first time.* They are:

_____

_____

___We have reported holdings for this title before. However, our holdings have changed. They are now: _____

_____

___We no longer have any issues of this title. Delete our holdings.

*Please include a photocopy of the title page. If no photocopy machine is available, list here the place of publication and publisher:

_____

INSTRUCTIONS:

- Use this form only to report holdings of titles already established in the XYZ Union Catalog.
- Use Update Form A to report a new title, title change or cessation of title, change in numbering, or ANY OTHER BIBLIOGRAPHIC INFORMATION.

THIS IS A SAMPLE DETAILED UNIT RECORD

BIBLIOGRAPHIC PORTION

```
1
TI  - NEW ENGLAND JOURNAL OF MEDICINE
TK  - NEW/E/J/O
TA  - N Engl J Med
FL  - 198,1928--
PL  - BOSTON
PU  - MASSACHUSETTS MEDICAL SOCIETY
GN  - CONTINUES BOSTON MEDICAL AND SURGICAL JOURNAL
IS  - 0028-4793
CD  - NEJMAG
AI  - IM ; SCI ; BA ; PA ; EM ; POP ; AIM ; MAP ; ICR ; CXP
FR  - W
OC  - OPEN
Y1  - 1928
LA  - ENG
MH  - MEDICINE
CY  - UNITED STATES
U2  - 0255562
CA  - W1 NE388
```

HOLDINGS DATA

```
L1  - 01AEB 01AJN 01ALB 01BNU 01BRN 01CON 01COR 01CPP 01CPS
      01DAM 01EMM 01HAN 01HER 01HHH 01HHI 01HMS 01ICR 01JEF
      01JKL 01MAN 01MCP 01MLC 01MRL 01MSK 01MTS 01NJN 01NUM
      01NYA 01NYS 01PED 01PEM 01PIT 01POC 01PPI 01PPS 01RKF
      01ROC 01RPM 01SBU 01SSB 01SSY 01TED 01TEM 01VAT 01VER
      01WES 01YAL
L2  - 02ALA 02BOW 02DUK 02EMU 02ETS 02EVC 02FLO 02GEO 02GTU
      02GWU 02JHU 02MCF 02MCN 02MCR 02MDB 02MIA 02MIS 02MRU
      02NCA 02NCC 02SCA 02SCR 02SOA 02SOF 02TEN 02TMC 02USU
      02VAN 02VIR 02WVA
L3  - 03CIN 03CLE 03DAC 03DET 03ILL 03JCL 03KEN 03LOU 03MIC
      03MSU 03NOU 03NWU 03OHT 03OHU 03OSU 03PEO 03RSM 03SIU
      03SLO 03SOD 03UIU 03WSU
L4  - 04COL 04CRU 04KAN 04MCO 04NEB 04STL 04UTA 04WSL
L5  - 05ARK 05BGH 05BRM 05LNO 05LSB 05LSU 05MEX 05OKL 05TAM
      05TCO 05TEX 05TGA 05TMA 05TSA 05TSW 05TTU 05TUL
L6  - 06ISL 06ORE 06WAS
L7  - 07ARI 07CDA 07CIR 07CLA 07CLL 07CSD 07CSF 07HML 07NEV
      07SOC 07STA
```

INTERNAL DATA

```
GA  - 1979 300   9 ; 1979 300  10 ; 1979 300  11 ; 1979 300  12 ; 1979
      300  13 ; 1981 304  19 ; 1981 304  20 ; 1981 304  21 ; 1981 304
      22 ; 1981 304  23 ; 1981 304  24 ; 1981 304  25 ; 1981 304  26
JD  - MEDICINE
ZN  - Z1.107.567.875
JC  - NOW
SB  - A ; M ; X
IA  - 701029
PY  - 1
XS  - 1
LJ  - 1984
ZA  - 8305271982 307 SUPPL 1 DEC 16
UI  - N14600000 - part of bibliographic record
```

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SERLINE UNIT RECORD

Category Qualifier	Data Element Name	Search Status	PRINT	PRINT FULL	PRINT DETAILED	PRINT LOC	PRINT AC	PRINT INDEX
AD	Address				X		X	
AI	Abstracting & Indexing Tags	*		X	X			X
AT	Added Title	TW	X	X	X			
CA	Call Number	*	X	X	X	X		
CD	Coden	*		X	X			
CY	Country	*		X	X		X	X
DA	Date of Entry	R			X			
DZ	Disallow Abstract Tag				X			X
FL	First/Last Issue		X	X	X		X	
FR	Frequency			X	X			
GA	Gaps				X			
GN	General Notes		X	X	X			X
IA	Indexing Authority Date	*,R			X			X
II	Indexing Information				X			X
IS	International Standard Serial Number	*	X	X	X			X
JC	Journal Title Code	*			X			X
JD	LJI Subject Heading	*			X			X
K1-K7	Regional Location Counts	*						
L1-L7	Regional Location Codes	TW			X	X		
LA	Language	*		X	X			X
LI	Special List Indicator	*			X			X
LJ	Pull Date	*			X			X
MH	MeSH Heading	*		X	X			
MR	Major Revision Date	R			X			X
OC	Open/Closed Indicator	*		X	X			
PL	City of Publication		X	X	X		X	X
PR	Price Print Version	*			X		X	
PRS	Price Search Version	R						
PU	Publisher	TW		X	X		X	
PY	Indexing Priority				X			
RG	Region as a Whole	*						
RI	Revision Indicator	*			X			X
SB	Journal Subset	*			X			X
SM	Series Treatment Code	*			X			
SX	Selectively Indexed Indicator	*			X			X
TA	Title Abbreviation	*		X	X			X
TI	Title	TW	X	X	X	X	X	X
TK	Title Search Key	*			X			
UI	Unique Identifier	*	X	X	X	X		X
U2	Other File's Unique Identifier	*		X	X			
XS	Indexing Status	*			X			X
Y1	Initial Year	*,R			X			
Y2	Final Year	*,R			X			
ZA	Zero Articles				X			X
ZN	MeSH Z Tree Number	*			X			X

SERIALS UNION LISTS
GLOSSARY AND ABBREVIATIONS

Access Point - A name, term, code under which a bibliographic record may be searched and identified.

ANSI - American National Standards Institute.

Bibliographic Record - The logically related data elements which collectively represent the information concerning a bibliographic work. It does not include holdings information of libraries.

Bibliographic Unit - A logical segment of the publication sequence of a serial as designated by the publisher, e.g. an issue, edition, etc. but excluding supplements, indexes, etc.

Bibliograhic Utility - An organization that maintains large on-line bibliographic data bases and provides products and services related to these bases to its customers/members. (Example: OCLC)

Batch Transfer - The transfer of a set of records processed as a single unit (i.e., a Region's serials data) to another data file.

Caption - A word or phrase attached as a prefix to the enumeration data describing the type of data, (e.g. volume, tome, Band, part, number or heft).

Central Serials Record - A total serials holdings record of a library, consisting of an enumerative statement of current issues, consolidated into summarized information concerning volumes and years held, to provide a retrospective volume-by-volume inventory.

Chronology - The different types of dates used by the publisher on the work to identify the individual bibliographic unit, e.g. nominal date, date of coverage, date of publication, date of printing.

COM - Computer output microform; microfilm or other non-print medium (usually microfiche) produced from computer tapes; used to produce catalogs, etc.

CONSER Project - (CONversion of SERials data base). A cooperative effort by the library community to build a machine-readable data base of quality serials cataloging information. Institutions participating in CONSER contribute bibliographic serials information to the data base (mounted by OCLC) and upgrade records entered by non-CONSER members.

Control Number - Unique identifier number assigned to each serial title.

Consortium - Group of institutions that has formally agreed to share resources and services among its members.

Corporate Body - An organization or group of persons that is identified by a particular name and that acts, or may act, as an entity, such as associations, institutions, business firms, non-profit enterprises, government agencies and conferences.

CRT - Cathode Ray Tube. A terminal with a television picture tube to display information visually.

Data Element - A distinguishable, defined unit of information.

Display - The presentation of data for human interpretation.

Editorial Center - The library, office or institution responsible for the operational aspects of the Union List.

Enumeration - The numerical system or systems used by the publisher on the bibliographic unit to distinguish one unit from another, one volume from another and to show the relationship of a bibliographic unit to the serial as a whole.

Field - A specified area in a record used for a particular category of data, e.g. location of title proper or ISSN information.

Format (a) - Any particular physical presentation of a bibliographic entity.

Format (b) - (Machine-readable data files). A predetermined order or arrangement of data in a record.

Gap - A break in the sequence of enumeration and/or chronology of a serial held by a reporting institution indicating a volume, issue or date not held. Does not refer to a break or discontinuity in the serial's publication pattern.

General Material Designation - A term indicating the broad class of materials to which an item belongs, e.g. microform, sound recording, etc.

Hardware - Physical computer equipment.

Heading - A name, word, or phrase placed at the head of a catalogue entry to provide an access point in the catalogue.

Holdings Statement - A record of the location, status and/or the bibliographic units of a specific serial held by a particular institution or collection. It usually follows the bibliographic statement.

Institution Code - A string of symbols that represents a library, organization, collection or physical site.

ISBD(S) - International Standard Bibliographic Description for Serials.

ISDS - International Serials Data System.

ISO - International Organization for Standardization.

ISSN - International Standard Serial Number. A unique number assigned to each serial title by the ISDS International Center in Paris to identify that title.

ITAC - International Target Audience Code.

Key-title - The unique name assigned to a serial by the International Serials Data System.

LC-MARC - Library of Congress MARC.

Magnetic Tape - A tape with a magnetic surface on which machine-readable data, such as records in the MARC-Serials format, can be stored.

MARC - Machine-readable cataloguing.

MARC-Serials Format - A machine-readable cataloguing and exchange format for serials data, developed by the Library of Congress.

Microform - A generic term for any medium, transparent or opaque, bearing micro-images.

National Biomedical Holdings Data Base - Automated data base for serials, monographs and audiovisuals of the National Library of Medicine.

NLM - National Library of Medicine.

Nominal Data - The date associated with identification data for a volume, issue, etc.

Numeric/Chronological Designation see Enumeration; Chronology.

OCLC - Online Computer Library Center, Inc. (OCLC) is the new name replacing the former "Ohio College Library Center" and OCLC, Inc., a bibliographic utility.

On-line - Direct user interrogation of, or input to, the computer containing the data base, via a terminal and a telephone line.

Participants - The libraries or institutions contributing records of their serials holdings to the union list.

Project Director - Head of the editorial center responsible for the management of the union list.

Retention Statement - A code or text display denoting the period for which the bibliographic units of the reported serial are retained by the reporting institution.

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Romanization - Conversion of names or text not written in the Roman alphabet to Roman alphabet form.

Search Key - A unique set of characters, formed by following a specific rule, input via a terminal to conduct a search.

Serial - A publication in print or in non-print form, issued in successive parts, usually having numerical or chronological designations, and intended to be continued indefinitely. Serials include periodicals, newspapers, annuals (reports, yearbooks, directories, etc.), journals, memoirs, proceedings, transactions, and the like of societies, and monographic series.

SERLINE - The name for the publicly searchable version of the National Library of Medicine's serials data base. Contains all current serial titles owned by NLM as well as some ceased titles; also contains holdings from other U.S. biomedical libraries with large serial collections. SERLINE contains part of the holdings data in the National Biomedical Holdings Data Base.

Title Proper - The chief name of a serial including any alternative title, but excluding parallel titles and other title information.

Uniform Title - A title used to identify a serial, to file it, and to link its bibliographic segments, when its title proper is identical to the title proper of another serial in the same catalogue or data base.

UBC - Universal Bibliographic Control.

UNIMARC - MARC International Format.

User - The individual borrower who makes use of the services of a union list.

SERIALS UNION LISTS
A BIBLIOGRAPHY

A. ARTICLES

Bell, Christine L. A SERLINE-based Union List of Serials for Basic Health Sciences Libraries: A Detailed Protocol. Bull Med Libr Assoc 70(4) October 1982, pp. 380-388.

Describes the development of a union list of serials for 116 libraries, including 94 hospital libraries. Stresses the importance of good planning and the importance of using bibliographic and holdings standards. The Union List was based on SERLINE, the machine-readable serials database of the National Library of Medicine.

Bloss, Marjorie E. And in Hindsight....the Past Ten Years of Union Listing. Serials Librarian 10(1/2) Fall 1985/Winter 1985-86, pp. 141-148.

The impact on union listing activities of growth in serials publishing and of budgetary stringency is discussed. Evidence is presented to show how advances in computer technology are making possible uniform representation of bibliographic and holdings information and so contributing to the success of union listing projects. Some important union listing publications are described, and the future of union listing is commented upon. The author acknowledges that many changes in union list compilation have occurred, the basic concepts of resource sharing have remained the same.

Bloss, Marjorie E. The Serials Pastiche: Union List of Serials. Drexel Library Quarterly 21(1) Winter 1985, pp. 101-111.

Describes union lists, their uses, historical perspectives and the processes involved in compiling a union list, including administrative and financial aspects, techniques of compilation, union list production, ongoing maintenance, user education, and evaluation of the union list project. A good article to read by any librarian interested in or planning a union list of serials project.

Brodie, Nancy. National Developments in Serials. Serials Librarian 6(1) Fall 1981, pp. 49-57.

Paper presented at the Canadian Library Association's Canadian Association of College and University Libraries Technical Services Coordinating Group Workshop, Vancouver, B.C., June 14, 1980. In the early 1970s, 2 national task groups recommended the establishment of a national serials data base in Canada. To create a data base libraries must share data about serials. Standards are a pre-requisite to sharing data: a standard definition of a serial, the ISSN, the MARC format, standards for holdings

statements and library symbols and cataloguing standards. Use of standard sources of data also facilitates sharing. A national serials data base now exists in Canada on the federal government DOBIS system jointly maintained by the National Library of Canada and the Canada Institute of Scientific and Technical Information. Data on holdings of major Canadian libraries are collected and edited in a central location.

Chopra, H.R. Origin and Development of Union Catalogues of Serials in India: a Survey. International Library Movement 3(4) 1981, pp. 107-122.

Discusses the importance of union catalogues of serials in developing countries, and presents a survey of the most important ones that have been brought out so far in India. Gives brief details of: the large number of catalogues published by individual institutions; the compilation of systematic regional union catalogues of scientific serials being undertaken by the Indian National Scientific Documentation Centre; and the work being done by the Social Science Documentation Centre in compiling a union list of social science serials in important libraries in India.

Conochie, Jean A. Has Serials Union Listing Come of Age? A Review of Four Recent Works on Union Listing. Serials Librarian 9(4) Summer 1985, pp. 67-72.

The author examines four recent sets of guidelines for production of union catalogues of serials. The common theme throughout all four is the necessity for careful planning and the need of adequate funding and staffing for what will otherwise be a waste of resources. The scope of a union list must be clearly defined. Standards for bibliographical input and holdings statements must be established. The ISSN is increasing in usefulness but has not yet achieved complete control.

Moules, Mary L. Producing a Local Union List of Serials with Word Processing Equipment. Serials Librarian 7(2) Winter 1982, pp. 27-34.

The current interest and activity in the production of periodicals union lists has not by-passed small nonacademic libraries, although they often do not have access to the latest automated means of production. The Illinois Valley Library System found itself in this position and, consequently, needed to make some difficult bibliographic decisions as well as find an effiient means of production. The Heart of Illinois Library Consortium Union List of Serials which resulted is arranged by latest title and was produced on an IBM Office System 6 word processor.

Munthe, Gerhard. The Academic Research Libraries in Norway. LIBER News Sheet (12) 1984, pp. 23-39.

Discusses the following aspects of academic librarianship in Norway: the role of the Royal University Library, Oslo, and the need for a national library in Norway; the development of a monographs and a periodicals union catalogue for Norway; proposals for a national acquisitions policy with 7

libraries taking responsibility for collecting in certain subject areas; library provision in the new regional university colleges; and recommendations for a new legal deposit law.

Ruff, Beryl. National Policies for Health Library Networks. WHO Chronicle 39(6) 1985, pp. 212-218.

It has been said that the two main ingredients for national health development are motivation and information. Yet local and regional health science libraries all too often lack current books and periodicals so that health workers, particularly in rural areas, have to work in an information vacuum. By developing practical strategies and encouraging cooperation and resource sharing between libraries, WHO's health literature services programme is helping Member States to ensure widespread access to current information on health issues. WHO policy recommendation to designate a national focal point for health literature services is stated. Includes a World List of Focal Points for health sciences literature for Africa, the Americas, Eastern Mediterranean, Southeast Asia, and Western Pacific.

Schultz, Baldwin, N.L. BCUC and Serials. Serials Librarian 6(1) Fall 1981, pp. 41-47.

Paper presented at the Canadian Library Association's Canadian Association of College and University Libraries Technical Services Coordinating Group Workshop, Vancouver, B.C., June 14, 1980. Presents a short history of the development of the British Columbia Union Catalogue Project's Serials Task Group December 77-June 80. Outlines obstacles to cooperation in the creation of a provincial union catalogue of serials and presents some possible methods of overcoming these obstacles.

Stephens, Marcia. The Valley Medical Network Uses Guidelines to Produce Union List of Serials. Bull Med Libr Assoc 71(3) July 1983, pp. 344-345.

A brief report on the actual production of a union list and what was learned from the experience. The author recommends to include the International Standard Serial Number (ISSN) for each entry; to hold a workshop for all participating libraries - 2 1/2 hours minimum. Participants must have a clear understanding of all coding procedures.

Szilvassy, Judith. ISDS: Worldwide Serials Control. IFLA Journal 8(4) 1982, pp. 371-378.

Description of the International Serials Data System (ISDS) an inter-governmental organization established within the UNESCO/UNISIST program in 1971. Purpose: to maintain an authentic registry of world serial publications with essential information for their bibliographic identification to publish the ISDS Register on microfiche with an ISSN and an alphabetical title index. The ISSN number assigned to serials by ISDS International Center in Paris is a title identification that has been

adopted by subscription agencies, publishers' catalogs, periodicals directories and others. The ISSN is used as primary information in union catalogs (national and regional), in all kinds of holdings lists, and key-title-ISSN indexes (local and national).

West German National Serial Data System. Outlook on Research Libraries 3(10) October 1981, pp. 11-13. tables.

The West German national serials data base is being jointly developed by the Deutches Bibliotheksinstitut and the State Library in West Berlin. It currently covers 260,000 titles-800,000 holdings in 1,000 West German libraries.

Willemin, Silvère. Technique of Union Catalogues: A Practical Guide. UNESCO Bull Libr 20(1) Jan-Feb. 1966, pp. 2-23.

A classic reference on union catalogs before the advent of automation. Basic principles described are still valid today.

B. GUIDELINES AND STANDARDS

American National Standards Institute, Inc. American National Standard for Information Sciences-Serials Holdings Statements, ANSI Z39.44-1986. New York, ANSI, 1986.

Establishes rules and punctuation for preparing standardized records of the bibliographic units of serials located at a particular institution at four levels of specificity: Level 1 identifies the serial and the holding institution; Level 2 adds coded data on such aspects as completeness of holdings and acquisition status; Level 3 adds enumeration and chronology information in a summary form; Level 4 provides enumeration and chronology in a detailed form. The specific data areas, data elements, and punctuation to be used in serials holdings statements are identified.

Guidelines for Union Lists of Serials: Serials Section, Resources and Technical Services Division. Chicago, American Library Association, 1982, 52 p.

Describes the steps in Union List creation from the inception of the list to maintenance and user education.

Guidelines for the Compilation of Union Catalogs of Serials. Paris, UNESCO:IFLA, 1982, 29 p.

Based on a study by Jean Whiffin entitled, "Guidelines for Union Serials; First Draft," British Columbia, 1981. Provides practical guidance for libraries interested in the establishment of new union catalogues. Endorsed by UNESCO and IFLA. Excludes a minimum bibliographic data element set and a minimum holdings data element set.

Midwest Health Science Library Network: Union List of Serials: Guidelines (Chicago), Locator/Union List Committee, Midwest Health Science Library Network, 1981, 53 p.

Contains three sections: (1) General - planning, building, developing, maintaining and updating union lists. (2) Specifics for the Midwest, U.S. (3) Appendices (sample coding sheets) and glossary. Sections 1 and 3 are useful for medical libraries everywhere. Section 2 describes regional/U.S. databases.

Whiffin, Jean. Union Catalogues of Serials; Guidelines for the Creation and Maintenance, with Recommended Standards for Bibliographic and Holdings Control. New York: The Haworth Press, 1983. Also published as Serials Librarian 8(1) Fall 1983, pp. 1-138.

An extensive report commissioned by IFLA and based on a survey of 200 existing union catalogues throughout the world. Includes detailed guidelines; appendices list definition of a serial and types of serials; glossary and abbreviation; summary of essential bibliographic and holdings data elements. Detailed index. Excellent reference for any librarian involved with a union list of serials project.

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C. RELATED READINGS

American National Standards Institute: American National Standard for Serials Holdings Statements at the Summary Level. ANSI Z39.42-1980. New York, ANSI, 1980.

Barral, Sabine; Guillou, Joeelle. The Grenoble Inter-regional Union Catalogue of Periodicals. Le catalogue colectif des periodiques inter-regional (C.P.I.) realise a Grenoble. Ass. Bibliot. Fr. Bull. Inf. (110) 1981, pp. 17-22.

Bloss, Marjorie E. Quality Control: Centralized and Decentralized Union Lists. Serials Review 8(3) Fall 1982, pp. 89-95.

Bloss, Marjorie E. Recommendations on Serials Holdings Statements at the Summary Level. Prepared for the IFLA Section on Serials Publications. Finalized version. Chicago, 1984.

Carini-Dainotti, Virginia. About Periodicals and the Varied Nature and Function of their Indexes, Inventories or Catalogues. Dei periodici e della varia natura e funzione dei loro indici, repertori o cataloghi. Accademie e Biblioteche d'Italia 48(3) May-June 1980, pp. 236-245.

Helal, Ahmed H.; Weiss, Joachim W. (eds). Current Trends in Serials Automation. Essen University Library (West Germany), Gesamthochschulbibliothek Essen, 1981.

Kartashov, N.S. Topical Questions of Bibliographical Activities in the Lenin State Library. Aktual'nye voprosy bibliograficheskoi deyatel'nosti Gosudarstvennoi biblioteki SSSR im V.I. Lenina. Sovetskaya Bibliografiya (5) 1979, pp. 3-10.

Koster, C.J. Standard Serial Citation: Bibliographical Standards for Union Catalogues of Serials. Catalogue & Index (21) Jan. 1971, pp. 3-5.

Osborn, Andrew D. Serials Publications: Their Place and Treatment in Libraries. 3rd ed. Chicago, American Library Association, 1980. 415 p.

Tehnzen, Jobst. The Importance of Supra-regional Periodicals Catalogues for Inter-library Lending. Die Bedeutung ueberregionaler Zeitschriftenverzeichnisse fuer den Leihverkehr. Z. Bibliot. u. Bibliog. 25(1) Jan-Feb 1978, pp. 16-20.

Walsh, Ray. The Development of Union Catalogues for Electricity, Energy and Related Industries: An Exercise in Retionalization and Resource-sharing. Australian Special Libraries News 16(1) March 1984, pp. 12-13.

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